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Cornelis Berkel van

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EXAMINER

BODDIE, WILLIAM

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/516,847	Applicant(s) BERKEL VAN, CORNELIS	
	Examiner WILLIAM L. BODDIE	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In an amendment dated January 17th, 2008, the Applicant amended claims 17-18, and 23. Currently claims 1-35 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4, 9-15, 20-22, 24-31, 33 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Katabami (US 5,528,002).

With respect to claim 1, Katabami discloses, a user input system (fig. 10, for example), comprising:

means for (146-7 in fig. 10) generating a alternating magnetic field (145 in fig. 10);

a user-holdable device comprising a resonant circuit (77 and 78 in fig. 10), means for coupling to ground (4 in fig. 10), and a conducting tip (3 in fig. 10), the means for coupling to ground being coupled to a first side of the resonant circuit (top side in fig. 10) and the conducting tip being coupled to a second side of the resonant circuit (bottom in fig. 10), the resonant circuit being operable to provide an alternating voltage

(92, 93 in fig. 3b; col. 19, lines 5-15) induced from the alternating magnetic field when positioned in the vicinity of the means for generating an alternating magnetic field (92,93 waveforms are induced as a result of the alternating magnetic field 145 in fig. 10); and means for sensing an output provided at the conducting tip due to the alternating voltage source when the conducting tip is in the vicinity of the means for sensing an output (3-19 in fig. 1a).

With respect to claim 2, Katabami discloses, a system according to claim 1 (see above), wherein the means for sensing an output (8-19 in fig. 1a) provided by the conducting tip comprises means for determining the strength of the output as sensed at plural locations (each location that the electrodes are crossed is sensed) and means for comparing the plural sensed output strengths to determine a position of the conducting tip relative to the plural locations (fig. 1b).

With respect to claim 4, Katabami discloses, a system according to claim 1 (see above), wherein the sensing means comprises an electric field sensing reception electrode (7 in fig. 1a; for example) and current sensing circuitry (fig. 1b) for determining a current excited in the electric field sensing reception electrode by an electric field generated by the conducting tip (col. 1, line 59-col. 2, line 5).

With respect to claim 9, Katabami discloses, a system according to claim 1 (see above), wherein the user-holdable device is for use as a pen or stylus (fig. 1).

With respect to claim 10, Katabami discloses, a system according to claim 9 (see above), wherein the conducting tip (3 in fig. 1a) is adapted to provide a writing feel to the user (clearly shaped to effectuate a writing feel; in fig. 1a).

With respect to claim 11, Katabami discloses, a system according to claim 1 (see above), wherein the user-holdable device comprises an external housing by which the user is to hold the user-holdable device (5 in fig. 1a), and wherein the means for coupling to ground is such that the coupling to ground is made via the user's hand when the user is holding the user-holdable device (col. 7, lines 12-18).

With respect to claim 12, Katabami discloses, a system according to claim 11 (see above); wherein the means for coupling to ground is further arranged to reduce shielding of the resonant circuit from the magnetic field generated by the means for generating an alternating magnetic field (note that the ground coupling is merely a ring around the end of the stylus; and does not span the entirety of the stylus).

With respect to claim 13, Katabami discloses, a system according to claim 11 (see above); wherein the means for coupling to ground comprises at least a portion of the housing being coupled to the first side of the resonant circuit and being sufficiently conducting for the coupling to ground via the user's hand (col. 7, lines 12-18).

With respect to claim 14, Katabami discloses, a system according to claim 13 (see above); wherein the resonant circuit (77, 78 in fig. 10) is positioned in the user-holdable device at a location away from the conduction portion (1 in fig. 1a) of the housing (clear from fig. 1a; that the resonance circuit is positioned away from the conduction portion).

With respect to claim 15, Katabami discloses, a system according to claim 12 (see above); wherein the user-holdable device further comprises a coil (4 in fig. 3a) arranged to couple the resonant circuit to the user's hand whilst substantially allowing

the magnetic field generated by the means for generating an alternating magnetic field to reach the resonant circuit (col. 7, lines 12-18).

With respect to claims 20-22, Katabami discloses, a user input system according to claim 1 (see above); an active matrix LCD display device (col. 1, lines 42-44), wherein the sensing means are arranged to sense the output provided by the conducting tip in an area corresponding to a display area of the LCD (col. 3, lines 14-19).

With respect to claim 24, Katabami discloses a user-holdable device for a user to provide input to a user input system (fig. 10; for example), comprising:

- a resonant circuit (77 and 78 in fig. 10);
- means for coupling to ground (4 in fig. 10); and
- a conducting tip (3 in fig. 10);

the means for coupling to ground being coupled to a first side of the resonant circuit (top side in fig. 10) and the conducting tip being coupled to a second side of the resonant circuit (bottom in fig. 10), the resonant circuit (77 and 78 in fig. 10) being operable to provide an alternating voltage (92, 93 in fig. 3b; col. 19, lines 5-15) induced from an alternating magnetic field (92,93 waveforms are induced as a result of the alternating magnetic field 145 in fig. 10).

With respect to claim 25, Katabami discloses, a device according to claim 24 (see above), wherein the user-holdable device is for use as a pen or stylus (fig. 1).

With respect to claim 26, Katabami discloses, a device according to claim 25 (see above), wherein the conducting tip (3 in fig. 1a) is adapted to provide a writing feel to the user (clearly shaped to effectuate a writing feel; in fig. 1a).

With respect to claim 27, Katabami discloses, a device according to claim 24 (see above), wherein the user-holdable device comprises an external housing by which the user is to hold the user-holdable device (5 in fig. 1a), and wherein the means for coupling to ground is such that the coupling to ground is made via the user's hand when the user is holding the user-holdable device (col. 7, lines 12-18).

With respect to claim 28, Katabami discloses, a device according to claim 27 (see above); wherein the means for coupling to ground is further arranged to reduce shielding of the resonant circuit from the magnetic field generated by the means for generating an alternating magnetic field (note that the ground coupling is merely a ring around the end of the stylus; and does not span the entirety of the stylus).

With respect to claim 29, Katabami discloses, a device according to claim 27 (see above); wherein the means for coupling to ground comprises at least a portion of the housing being coupled to the first side of the resonant circuit and being sufficiently conducting for the coupling to ground via the user's hand (col. 7, lines 12-18).

With respect to claim 30, Katabami discloses, a device according to claim 29 (see above); wherein the resonant circuit (77, 78 in fig. 10) is positioned in the user-holdable device at a location away from the conduction portion (1 in fig. 1a) of the housing (clear from fig. 1a; that the resonance circuit is positioned away from the conduction portion).

With respect to claim 31, Katabami discloses, a device according to claim 28 (see above); wherein the user-holdable device further comprises a coil (4 in fig. 3a) arranged to couple the resonant circuit to the user's hand whilst substantially allowing the magnetic field generated by the means for generating an alternating magnetic field to reach the resonant circuit (col. 7, lines 12-18).

With respect to claim 33, Katabami discloses, a method of sensing user input from a user-held device (5 in fig. 1a), comprising:

generating an alternating magnetic field that passes in to the user-held object (145 in fig. 10);

inducing an alternating voltage in the user-held object from the alternating magnetic field (92, 93 waveforms are induced as a result of the alternating magnetic field 145 in fig. 10);

providing an output from the alternating voltage at a conducting tip (3 in fig. 10) of the user-held device (3992, 93 in fig. 3b; col. 19, lines 5-15); and

using sensing means to sense the output when the user-held device is positioned such that the conducting tip is in the vicinity of the sensing means (3-19 in fig. 1a; also note fig. 1b).

With respect to claim 35, Katabami discloses, a method according to claim 33 (see above), wherein the sensing means comprises an electric field sensing reception electrode (7 in fig. 1a; for example) and current sensing circuitry (fig. 1b) for determining a current excited in the electric field sensing reception electrode by an electric field generated by the conducting tip (col. 1, line 59-col. 2, line 5).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katabami (US 5,528,002) in view of Yamanami et al. (US 4,902,858).

With respect to claim 5, Katabami discloses, a system according to claim 4 (see above).

Katabami does not expressly disclose, wherein the sensing means is arranged to substantially filter out currents produced in the electric field sensing reception electrode by electric fields generated by the means for generating an alternating magnetic field.

Yamanami discloses, wherein sensing means (fig. 3) are arranged to substantially filter out currents produced in an electric field sensing reception electrode (13 in fig. 3) by electric fields generated by the means for generating an alternating magnetic field (col. 7, lines 26-32)

Yamanami and Katabami are analogous art because they are from the same field of endeavor namely, electric field sensing touch screens.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include in Katabami the filtering means of Yamanami for the well-known benefits of increasing the sensitivity and s/n level of the output signal.

With respect to claim 6, Yamanami and Katabami disclose, a system according to claim 5 (see above).

Katabami, when combined with Yamanami, discloses, wherein the filtering out is performed using a difference in phase between the electric field generated by the means for generating an alternating magnetic field and the electric field generated by the conducting tip (Yamanami; col. 7, lines 26-32).

7. Claims 7-8, 19 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katabami (US 5,528,002) in view of Ely et al. (US 6,667,740).

With respect to claim 7, Katabami discloses, a system according to claim 1 (see above).

Katabami does not expressly disclose shielding.

Ely discloses, wherein shielding is provided to substantially block any electric field generated by the means for generating an alternating magnetic field and substantially allow to pass the magnetic field generated by the means for generating an alternating magnetic field (21 in fig. 2; col. 7, lines 31-38).

Ely and Katabami are analogous art because they are from the same field of endeavor namely wireless pen touch screens.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the shielding of Ely in the device of Katabami for the benefit of enhancing the sensitivity of the digitizer (Ely; col. 7, lines 35-38).

With respect to claim 8, Katabami discloses, a system according to claim 4 (see above).

Katabami does not expressly disclose determining the distance between the conducting tip and the electrode.

Ely discloses, the system is arranged to determine the distance of the tip from the plane of the electric field reception electrode, compare the determined distance to a threshold value, and if the determined value is less than or equal to the threshold then treat the conducting tip position as input and if the determined value is greater than the threshold then not treat the conducting tip position as input (Ely; col. 11, lines 22-61).

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the distance determination of Ely in the device of Katabami for the benefit of detecting stylus movements up and down (Ely; col. 11, lines 22-61).

With respect to claim 19, Katabami discloses, a system according to claim 1 (see above).

Katabami does not expressly disclose additional user-holdable devices.

Ely discloses a system comprising one or more further user-holdable devices, respective user-holdable devices having different tuned frequencies (col. 23, lines 59-63).

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the additional devices of Ely in the system of Katabami for the well-known benefit of allowing multiple users to interact with the system.

With respect to claim 32, Katabami discloses, a device according to claim 24 (see above).

Katabami does not expressly disclose additional user-holdable devices.

Ely discloses a system comprising one or more further user-holdable devices, respective user-holdable devices having different tuned frequencies (col. 23, lines 59-63).

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the additional devices, each with its own different tuned frequency, of Ely in the system of Katabami for the well-known benefit of allowing multiple users to interact with the system.

8. Claims 3, 16-17 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katabami (US 5,528,002) in view of Stein et al. (US 5,365,461).

With respect to claim 3, Katabami discloses, a system according to claim 1 (see above).

Katabami does not expressly disclose, a resistive sheet.

Stein discloses, wherein the means for sensing the user's finger comprises a resistive sheet (col. 3, lines 42-46) and 33current measuring means (14-17 in fig. 1) arranged to measure a capacitive current flowing from the conducting tip to the resistive sheet (col. 4, lines 7-14).

Katabami and Stein are analogous art because they are from the same field of endeavor namely touch screen systems using tablets.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the dual stylus and finger sensing means of Stein in the device of Katabami.

The motivation for doing so would have been to allow the user to additionally touch the system to provide input.

With respect to claim 16, Katabami discloses a system according to claim 1 (see above).

Katabami does not expressly disclose a means for sensing a user's finger.

Stein discloses, a user input device comprising a means for both sensing a user's finger and a stylus (fig. 1).

Katabami and Stein are analogous art because they are all from the same field of endeavor namely touch screen systems using tablets.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the dual stylus and finger sensing means of Stein in the device of Katabami.

The motivation for doing so would have been to allow the user to additionally touch the system to provide input.

With respect to claim 17, Katabami and Stein disclose, a system according to claim 16 (see above).

Katabami, when combined with Stein, further discloses, wherein the sensing means comprises a resistive sheet (Stein; col. 3, lines 42-46) and current measuring means (14-17 in fig. 1) arranged to measure a capacitive current flowing from the conducting tip to the resistive sheet (col. 4, lines 7-14), and wherein the means for sensing the user's finger comprises the resistive sheet (Stein; col. 3, lines 42-46), the current measuring means (Stein; 14-17 in fig. 1), and means for distinguishing between

sensing of the user's finger and sensing of the user-holdable device (Stein; col. 2, lines 19-21).

With respect to claim 34, Katabami discloses, a system according to claim 33 (see above).

Katabami does not expressly disclose, a resistive sheet.

Stein discloses, wherein the means for sensing the user's finger comprises a resistive sheet (col. 3, lines 42-46) and current measuring means (14-17 in fig. 1) arranged to measure a capacitive current flowing from the conducting tip to the resistive sheet (col. 4, lines 7-14).

Katabami and Stein are analogous art because they are from the same field of endeavor namely touch screen systems using tablets.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the dual stylus and finger sensing means of Stein in the device of Katabami.

The motivation for doing so would have been to allow the user to additionally touch the system to provide input.

9. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katabami (US 5,528,002) in view of Teterwak (US 5,777,898).

With respect to claim 16, Katabami discloses a system according to claim 1 (see above).

Neither Ely nor Katabami expressly disclose a means for sensing a user's finger.

Teterwak discloses, a user input device comprising a means for both sensing a user's finger and a stylus (col. 5, lines 15-21).

Katabami and Teterwak are analogous art because they are all from the same field of endeavor namely touch screen systems using tablets.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the dual stylus and finger sensing means of Teterwak in the device of Katabami.

The motivation for doing so would have been to allow the user to additionally touch the system to provide input.

With respect to claim 18, Katabami and Teterwak disclose, a system according to claim 16 (see above).

Katabami, when combined with Teterwak, further discloses, wherein the sensing means comprises an electric field sensing reception electrode (Katabami; 7 in fig. 1a; for example) and current sensing circuitry (Katabami; fig. 1b) for determining a current excited in the electric field sensing reception electrode by an electric field generated by the conducting tip (Katabami; col. 1, line 59-col. 2, line 5), and wherein the means for sensing a user's finger comprises an electric field sensing transmission electrode (Teterwak; col. 5, lines 42-46), the electric field sensing reception electrode (Teterwak; col. 5, lines 21-26), and circuitry for sensing changes cause by the user's finger to a current excited in the electric field sensing reception electrode by an electric field generated by the electric field sensing transmission electrode (Teterwak; 16-19 in fig. 1).

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10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ely et al. (US 6,667,740) in view of Katabami (US 5,528,002) and further in view of Colgan et al. (US 6,204,897).

With respect to claim 23, Katabami discloses a display device according to claim 20 (see above).

Katabami does not expressly disclose that the sensing means comprises a resistive sheet and current measuring means, and wherein the resistive sheet is provided by a common electrode of the display device.

Colgan discloses, wherein the sensing means comprises a resistive sheet (201, 203 in fig. 7) and current measuring means (current sense circuitry in fig. 12) arranged to measure a capacitive current flowing from the conducting tip to the resistive sheet, and wherein the resistive sheet is provided by a common electrode of the display device (col. 2, lines 48-52).

Colgan and Katabami are all analogous art because they are all from the same field of endeavor namely, touch screen design circuitry.

At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the sensing means of Katabami with the resistive sheet and current measuring means as taught by Colgan.

The motivation for doing so would have been the well-known benefit of reducing the number of manufacturing steps.

Conclusion

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM L. BODDIE whose telephone number is (571)272-0666. The examiner can normally be reached on Monday through Friday, 7:30 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/

Supervisory Patent Examiner, Art Unit 2629

/W. L. B./

Examiner, Art Unit 2629

3/26/08